

Listing of Claims

1. (Currently Amended) An apparatus for performing a picture-in-picture (PIP) in a display device, comprising:
 - a first video processor converting a first video signal into data representing a displayable main picture;
 - a second video processor converting a second video signal into data representing a displayable sub-picture; and
 - a microcomputer controlling the first video processor and the second video processor, so that at least one of the main picture data or [[and]] the sub-picture data is at least partially outputted in accordance with a shape of the sub-picture determined by a user.
2. (Currently Amended) The apparatus according to claim 1, wherein the microcomputer provides the [[a]] user with a sub-picture setting menu for allowing the user to select or modify ~~selecting and modifying~~ the sub-picture shape.
3. (Original) The apparatus according to claim 2, wherein the sub-picture setting menu includes a plurality of selectable sample shapes.

4. (Original) The apparatus according to claim 3, wherein the sub-picture setting menu further includes a selectable option for creating and adding new sub-picture sample shapes based on the user's preference.

5. (Original) The apparatus according to claim 1, wherein the sub-picture setting menu includes a plurality of selectable options for controlling a size and a position of the sub-picture.

6. (Original) The apparatus according to claim 1, wherein the microcomputer displays the sub-picture on a screen depending upon a pixel information corresponding to the sub-picture shape selected or modified by the user.

7. (Original) The apparatus according to claim 1, wherein the microcomputer controls the first video processor, so as to output a portion of the main picture data corresponding to an area of the screen excluding the sub-picture shape selected or modified by the user.

8. (Original) The apparatus according to claim 1, wherein the microcomputer controls the second video processor, so as to output a portion of the sub-picture data corresponding to the sub-picture shape selected or modified by the user.

9. (Original) The apparatus according to claim 1, further comprising a multiplexer combining the main picture data and the sub-picture data and controlling an emphasis ration of the sub-picture to the main picture in accordance with a control of the microcomputer.

10. (Original) The apparatus according to claim 1, further comprising: a first memory storing the first video signal; and a second memory storing the second video signal.

11. (Currently Amended) A method for performing a picture-in-picture (PIP) in a display device, comprising:

selecting or modifying a sub-picture shape determined by a user;

converting a first video signal and a second video signal into data representing a main picture and data representing a sub-picture, respectively; outputting at least one of the main picture data and the sub-picture data partially depending upon the sub-picture shape selected or modified by the user; and

combining the outputted main picture data and sub-picture data.

12. (Original) The method according to claim 11, wherein the user selects or modifies the sub-picture shape by using a sub-picture setting menu being displayed on a screen.

13. (Original) The method according to claim 12, wherein the user selects any one of a plurality of sub-picture sample shapes included in the sub-picture setting menu.

14. (Original) The method according to claim 12, wherein the user modifies a pixel information of the sub-picture from the sub-picture setting menu, so as to modify a shape of the sub-picture.

15. (Original) The method according to claim 11, wherein the sub-picture setting menu includes a plurality of selectable options for controlling a size and a position of the sub-picture.

16. (Original) The method of claim 11, wherein the outputting the main picture data and the sub-picture data comprises selectively outputting a portion of the main picture data corresponding to an area of the screen excluding the selected or modified sub-picture shape.

17. (Original) The method of claim 11, wherein the outputting the main picture data and the sub-picture data comprises selectively outputting a portion of the sub-picture data corresponding to the selected or modified sub-picture shape.

18. (Original) The method according to claim 11, wherein the outputting the main picture data and the sub-picture data comprises selectively outputting a portion of the main picture data corresponding to an area of the screen excluding the selected or modified sub-picture shape and selectively outputting a portion of the sub-picture data corresponding to the selected or modified sub-picture shape, simultaneously.

19. (Original) The method according to claim 11, wherein the main picture data is an on screen display data.

20. (New) The apparatus according to claim 1, wherein the shape is a geometric shape different from a square or rectangle.

21. (New) The apparatus according to claim 20, wherein the geometric shape is one of a heart, a diamond, circle, or a triangle.

22. (New) The apparatus according to claim 20, wherein the geometric shape is a new shape created by the user.

23. (New) The apparatus according to claim 22, wherein said new shape being different from information indicating a predetermined shape stored in the display device.

24. (New) The apparatus according to claim 22, wherein the microcomputer:
receives information from the user setting a position of one or more angular points of the new shape; and
outputs at least a portion of the sub-picture data based on the one or more angular points set by the user.

25. (New) The apparatus according to claim 22, wherein the microcomputer rotates an orientation of a shape pre-stored in the display device to be used in outputting at least a portion of the sub-picture data.

26. (New) The apparatus according to claim 22, wherein the microcomputer:
receives information from the user modifying information indicative of a pre-stored shape to be used in outputting at least a portion of the sub-picture data, wherein said modification includes rotating an orientation of the pre-stored shape.

27. (New) The apparatus according to claim 22, wherein the microcomputer:
receives information from the user modifying information indicative of a pre-stored shape to be used in outputting at least a portion of the sub-picture data, wherein said information is pixel information.

28. (New) The apparatus according to claim 27, wherein the pixel information includes one or more pixel addresses set by the user.

29. (New) The apparatus according to claim 22, further comprising:
a memory to store information indicative of the new shape created by the user.

30. (New) The apparatus according to claim 29, wherein the microcomputer displays information indicative of the new shape created by the user in a menu with information indicative of other shapes.

31. (New) The apparatus according to claim 1, wherein the microcomputer:
receives information from the user indicating a number of sub-picture data to be output in separate screen areas of the display device with the main picture, wherein said number is greater than or equal to two and wherein the sub-picture data output in each of the screen areas corresponds to different video information.

32. (New) The apparatus according to claim 1, wherein the microcomputer:
outputs the sub-picture data in a first screen area having a first shape,
wherein the first screen area is included in a second screen area having a second
shape different from the first shape, the main picture data at least partially output outside of the
second screen area.

33. (New) The apparatus according to claim 32, wherein the first shape corresponds
to the shape of the sub-picture determined by the user.

34. (New) The apparatus according to claim 1, wherein the microcomputer:
outputs the sub-picture data in a first screen area having a first shape,
wherein the first screen area is included in a second screen area having a second
shape different from the first shape, the main picture data at least partially output between the
first and second screen areas and also outside of the second screen area.

35. (New) The apparatus according to claim 34, wherein the first shape corresponds
to the shape of the sub-picture determined by the user.